REMARKS

Claims 1-4, 7, 8, 15-17, 26, 28, 30-34 and 43-48 were pending.

By virtue of this response, Claims 1-2, 26, 28, 30-34, 43 and 46-48 are amended.

New apparatus Claims 49 and 50 are being added.

By virtue of this response, Claims 1-4, 7, 8, 15-17, 26, 28, 30-34 and 43-50 are now pending

No new matter is being added.

Objections to the claims

Claims 30-34 were objected to as depending from a cancelled claim (claim 29). The applicant thanks the Examiner for noting this informality and for affording this opportunity to make a corresponding correction. Pursuant to this amendment these claims now depend from claim 26. The applicant therefore respectfully submits that these claims are in suitable condition to support examination and allowance.

Rejections under 35 U.S.C. 101

Claims 1-4, 7, 8, 15-17, 26-39, and 43-48 were rejected under 35 U.S.C. 101 as not presenting patent-eligible subject matter.

Claims 26-39 and 46-48

These claims were directed to a "computer-readable medium." The Examiner expressed concern that this expression is broad enough to encompass non-statutory content. Pursuant to this amendment, claims 26, 28, and 30-34 have been amended to now be directed to a "remote transceiver" while claims 27, 29, and 35-39 have been cancelled without prejudice. As a remote transceiver is clearly an apparatus, the applicant respectfully submits that the claimed subject matter is now clearly within the ambit of 35 U.S.C. 101. Claims 46-48, in turn, are amended to now refer to a "base station." As a base station is clearly an apparatus, again the applicant respectfully submits that the claimed subject matter is now clearly within the ambit of 35 U.S.C. 101.

Claims 1-4, 7, 8, 15-17, and 43-45

These claims were directed to "methods." The Examiner expressed concern that the recited steps could potentially be carried out in the absence of a corresponding apparatus and hence represent non-statutory content. Pursuant to this amendment we have made the tie between the recited steps and a particular apparatus clear. In independent claim 1, it is now clear that the steps are carried out by a "remote transceiver." In independent claim 43, it is now clear that the steps are carried out by a "base station." The remaining claims are ultimately dependent upon one of these independent claims. As these method claims are now all clearly tied to a particular apparatus, we respectfully submit that all of these claims are well within the patent-eligibility requirements of 35 U.S.C. 101.

Claim Rejection under 35 U.S.C § 103(a) of claims 1-4, 7, 8, 15-17, 26, 28, 30-34 and 43-48

On pages 4-7 of the Office Action, Claims 1-4, 7, 8, 15-17, 26, 28, 30-34 and 43-48 are rejected under 35 USC § 103(a) as being unpatentable over WO 00/57574 (hereinafter referred to as "Zeira") in view of US 2005/0025056 (hereinafter referred to as "Chen") and further in view of US 2001/0036823 (hereinafter referred to as "Van Lieshout"). Applicants are traversing this rejection.

The application presently contains six independent claims, namely method Claims 1 and 43, and apparatus Claims 26, 46, 49, and 50 (the latter two claims being newly introduced).. Each of independent Claims 1, 26, 43, 46, 49 and 50 recites, inter alia, "on a ***shared physical channel*** used to carry allocation and scheduling information from the base station to the remote transceiver, ***receiving [or sending] an allocation of a scheduled uplink transmission resource and transmit power control (TPC) command***". Below, Applicants explain that Ziera in view of Chen and further in view of Van Lieshout does not teach all of the elements of these claims.

The Office Action suggests that Ziera discloses, with respect to Claim 1, the features of: determining a path loss for a radio channel between a base station and the remote transceiver (on page 2, lines 14-21; page 4, line 17-page 5, line 8); receiving a transmit power control (TPC) command (on page 4, line 17-page 5, line 8); and calculating at the remote transceiver, a transmit

power level for the scheduled uplink transmission resource based upon the path loss and the TPC command (on page 4, line 18 to page 5, line 8).

The Office Action suggests that Ziera fails to disclose, with respect to Claim 1, the features of '***a shared physical channel*** used to carry allocation and scheduling information from the base station to the remote transceiver, and ***receiving an allocation of a scheduled uplink transmission resource***'.

The Office Action then suggests that Chen, in a 'related' art and in paragraphs [0012] and [0052-0057], discloses, with respect to Claim 1, the features of: 'used to carry allocation and scheduling information from the base station to the remote transceiver, and receiving an allocation of a scheduled uplink transmission resource'.

Based thereon, the Office Action states that it is 'obvious to one of ordinary skill in the art at the time of the invention to provide the teaching of Chen to Zeira in order to perform the efficient scheduling processing and to locate radio resources efficiently in the uplink high-speed packet communications method (Chen paragraph 12)'.

The Office Action then acknowledges that Ziera and Chen both fail to disclose, with respect to Claim 1, the feature of 'on ***a shared physical channel*** used to carry allocation and scheduling information and receiving an allocation of a scheduled uplink transmission resource ...'.

The Office Action then suggests, however, that Van Lieshout, in a field that is neither characterized as being related to nor in a same field of endeavor, in paragraph [0006], discloses, with respect to Claim 1, the feature of: 'on ***a shared physical channel*** used to carry allocation and scheduling information and receiving an allocation of a scheduled ***uplink*** transmission resource ...'.

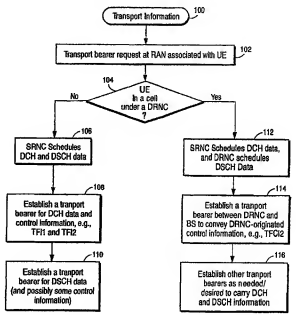
Based thereon, the Office Action states that it is 'obvious to one of ordinary skill in the art at the time of the invention to provide the teaching of Van Lieshout to Chen and Zeira so that the mobile unit can find out the available resources that it can use from the base station'.

In response, Applicants respectfully disagree.

It is respectfully submitted that the Office Action fails to establish prima facie obviousness for the following reasons. Below, Applicants explain that Zeira, in view of Chen and Van Lieshout, does not teach all of the elements of Claims 1, 26, 43 and 46.

With reference to the features of Claim 1 above, the teachings of Zeira in view of Chen and further in view of Van Lieshout fail to teach: 'on ***a shared physical channel*** used to carry allocation and scheduling information and receiving an allocation of a scheduled uplink transmission resource …', as recited in Claim 1.

It is clear to a skilled person in reading Van Lieshout that what is actually disclosed by Van Lieshout is a network that ***does not use a shared control channel*** on the downlink to allocate ***uplink*** resources. In contrast, the teaching of Van Lieshout is to use a transport format combination indicator (TFCI) transmission on a ***dedicated*** downlink channel to convey downlink shared channel resources (DSCH) to a mobile unit. We respectfully observe that this is the antithesis of the claimed invention. This clear teaching of Van Lieshout is illustrated in Fig. 5 (shown at the right) where the downlink shared channel resources "DSCH" indication clarifies that Van Lieshout discloses allocation of downlink resources (and notably not ***uplink*** (UL) resources). A further clarification of the teaching of Van Lieshout in allocating downlink resources is found in paragraph [0023] and again in the last five lines of paragraph [0026], where it specifies that the allocation of DL resources is made via a dedicated DL channel, see paragraphs [0031], [0033] and [0036].



Thus, Applicants respectfully disagree that Van Lieshout discloses the feature in Claim 1 of 'on ***a shared physical channel*** used to carry allocation and scheduling information and receiving an allocation of a scheduled ***uplink*** transmission resource …', (***Emphasis added***).

Claim 26 is a remote transceiver that implements a computer program corresponding to the method of Claim 1. Consequently, the arguments set forth above in support of Claim 1 apply equally to Claim 26. In accordance with the aforementioned explanations, it is therefore respectfully submitted that the teachings of Zeira in view of Chen and further in view of Van Lieshout fail to teach: 'on ***a shared physical channel*** used to carry allocation and scheduling information and receiving an allocation of a scheduled ***uplink*** transmission resource ..., as recited in claim 26.

Claim 43 is a method claim for a base station that corresponds to the remote transceiver method of Claim 1. Consequently, the arguments set forth above in support of Claim 1 apply equally to Claim 43. In accordance with the aforementioned explanations, it is therefore respectfully submitted that the teachings of Zeira in view of Chen and further in view of Van Lieshout fail to teach: 'on a ***shared physical channel*** used to carry allocation and scheduling information from the base station to a remote transceiver, ***sending*** an allocation of a scheduled ***uplink*** transmission resource ***and transmit power control (TPC) command'*** as recited in claim 3.

Claim 46 is a base station having a computer program that corresponds to the method of Claim 1. Consequently, the arguments set forth above in support of Claim 1 apply equally to Claim 46. In accordance with the aforementioned explanations, it is therefore respectfully submitted that the teachings of Zeira in view of Chen and further in view of Van Lieshout fail to teach: 'on ***a shared physical channel*** used to carry allocation and scheduling information and receiving an allocation of a scheduled ***uplink*** transmission resource and a transmit power control (TPC) command, as recited in claim 46.

New Claim 49 is a remote transceiver that implements the method of Claim 1. Consequently, the arguments set forth above in support of Claim 1 apply equally to Claim 49. In accordance with the aforementioned explanations, it is therefore respectfully submitted that the teachings of Zeira in view of Chen and further in view of Van Lieshout fail to teach: 'on ***a shared physical channel*** used to carry allocation and scheduling information and receiving an allocation of a scheduled ***uplink*** transmission resource ..., as recited in claim 49.

New Claim 50 is a base station claim that implements the method of Claim 43. Consequently, the arguments set forth above in support of Claim 43 apply equally to Claim 50. In accordance with the aforementioned explanations, it is therefore respectfully submitted that the teachings of Zeira in view of Chen and further in view of Van Lieshout fail to teach: 'on a ***shared physical channel*** used to carry allocation and scheduling information from the base station to a remote transceiver, ***sending*** an allocation of a scheduled ***uplink*** transmission resource ***and transmit power control (TPC) command'*** as recited in claim 50.

Although the points raised above are sufficient to distinguish the claims from the cited prior art references, for the record we note that the Office Action also suggests that Zeira and Chen comprise a "related art." Applicant respectfully disagrees with this suggestion.

Zeira (see throughout the description, for example the abstract and background) clearly indicates that it's relevant field is 'combined closed loop/open loop power control in a spread spectrum communication system' and more particularly measuring power levels from transmissions and determining path loss estimates. Chen, on the other hand, clearly relates to the wholly different field of packet data communications between a base station and a mobile station (see throughout the description, for example the abstract and field of the invention).

It is noteworthy that there is no disclosure within Zeira of any aspect of packet data communications. Thus, there is no reason for a skilled person working in the field of power control to consider the field of packet data communications, as disclosed by Chen. Furthermore, there is no reason for a skilled person working in the packet data communications field of Chen to consider the field of power control, as disclosed by Zeira.

It is further noted that the field of Van Lieshout is a use of indicators in a drift radio network controller to allocate downlink resources (see background). It is further noted that the Office Action has advanced no comment as to why Van Lieshout is from the same field of endeavor as that of Zeira and Chen. Thus, Applicant respectfully disagrees with any suggestion that a skilled artisan would consider their respective teachings.

In addition, it is respectfully submitted that any theoretical combination of the teachings of Zeira with Chen will require considerable modification to the architecture of both Zeira as

well as Chen, not least because the communication units and associated methods of either document have no bearing on the field of the other document.

Furthermore, it is respectfully submitted that any theoretical combination of the teachings of Zeira with Van Lieshout will again require considerable modification to the architecture of both Zeira as well as Van Lieshout, not least because the communication units and associated methods of either document have no bearing on the field of the other document.

Furthermore, it is respectfully submitted that any theoretical combination of the teachings of Chen with Van Lieshout will also require considerable modification to the architecture of both Chen as well as Van Lieshout, not least because the communication units and associated methods of either document have no bearing on the field of the other document.

Indeed, the Office Action does not explain how such a combination of wholly different teachings can be achieved.

Additionally, Applicants note that under a rejection under 35 U.S.C.5 103, the prior art references must not render the prior art unsatisfactory for its intended purpose of the claimed invention (MPEP § 2143.01).

Accordingly, one of skill in the art would not apply any theoretical teaching of shared downlink physical channels (noting the shared physical channel teaching of Van Lieshout allocates ***downlink*** resource) to both Zeira and Chen, as making such a combination would render both Zeira and Chen respectively unsatisfactory for their intended purpose, as both explicitly require the use of a dedicated control channel for their respective, wholly different purposes.

In addition, it is particularly noted that Chen has as an objective (see paragraphs [0010] and [0011]), a reduction in the number of notification bits to report in data packets to reduce a burden on a transmission buffer. In direct contrast to the aim of Chen, the Office Action has suggested that a skilled person may wish to combine the teaching of Zeira into Chen and, thus, send further information in the packet data communication architecture, namely power control commands. Applicants note, therefore, that the rejection under 35 U.S.C.5 103, where the prior art references must not render the prior art unsatisfactory for its intended purpose of the claimed

invention (MPEP 2143.01) is improperly formulated. See MPEP 2143.01, Subsection entitled THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE citing *In re Gordon*, 733 F.2d 900 (Fed Cir. 1984).

It is further respectfully submitted that the reasons stated in the Office Action for combining the references is insufficient for establishing prima facie obviousness. In this respect, the reason provided in the Office Action for combining the teachings of Zeira and Chen is simply:

> "...obvious ... to provide the above teaching of Chen to Zeira in order to perform the ***efficient scheduling processing*** and to allocate ***radio resources efficiently in the uplink high speed packet communications method***" [Emphasis added]

The claimed invention provides a mechanism for performing a combined open loop and closed loop power control scheme and in particular for combining on the same physical channel an allocation of scheduled uplink transmission resources with feedback information on the combined power control scheme (see paragraph [0084]).

Zeira has, as an objective (see page 4, lines 13-14), the maintenance of signal quality and low transmission levels. Thus, the Office Action does not advance any evidence that Chen will satisfy this requirement.

Chen, has, as an objective (see paragraphs [0010] and [0011]), a reduction in the number of notification bits to report in data packets to reduce a burden on a transmission buffer. In direct contrast to the aim of Chen, the Office Action has suggested that a skilled person may wish to combine the teaching of Zeira into Chen and, thus, send further information in the packet data communication architecture, namely power control commands.

Furthermore, these reasons appear to be taken from Chen, which already offers a solution to the aforementioned allocation of ***radio resources efficiently in the uplink***. Consequently, it is respectfully submitted that if Chen meets the above need to allocate ***radio resources efficiently in the uplink***, the skilled person would have no reason to refer to either Zeira (or Van Lieshout,

where no properly formulated reason has yet been provided), and indeed would be particularly motivated not to refer to Zeira for the reasons mentioned above.

Hence, it is submitted that a sufficient reason has not been provided to make the suggested combination. Referring to MPEP 2143.01, Subsection IV entitled "Mere Statement That The Claimed Invention Is Within the Capabilities of One of Ordinary Skill in the Art is Not Sufficient By Itself To Establish Prima Facie Obviousness." seems pertinent. This subsection states: "Rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'" *KSR Int'l v. Teleflex, Inc.*, 550 U.S. 127, 82 USPQ2d at 1396 (2007). See also *Ex parte Penhasi*, BPAI Appeal No. 2007-2534 (December 13, 2007) ("The Examiner has not articulated a sufficient reason why one skilled in the art would have modified [the art] and arrived at the presently claimed subject matter."). It is therefore submitted that the Office Action has not satisfied the necessary criteria of providing a reasoning to combine Zeira with Chen and further with Van Lieshout and so the rejection raised is improperly formulated.

Furthermore, it is respectfully submitted that Zeira does not suggest any modification thereof with the teachings of Chen. Similarly, Chen does not suggest modification thereof with the teachings of Zeira. Similarly, Zeira does not suggest modification thereof with the teachings of Van Lieshout. Similarly, Chen does not suggest modification thereof with the teachings of Van Lieshout. Indeed, it is submitted that the skilled person, reading Zeira or Chen or Van Lieshout, is not provided with a reasonable expectation of success when making the combination suggested in the Office Action due to the lack of any such indication of suitability or desirability to make a modification.

Hence, there is no teaching in the cited prior art suggesting the modification and it is the present application alone that teaches the modified apparatus. The applicant's respectfully submit that one can only achieve something close to the claimed result by employing the applicant's own teachings, using impermissible hindsight, to effect a highly-selective picking and choosing amongst the teachings of these various references.

Claims 2-4, 7, 15, 26, 28, 32, 33 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Zeira in view of Chen and further in view of Van Lieshout.

For at least the reason that Claims 2-4, 7, 15, 26, 28, 32, 33 each depend from an allowable independent Claim, Claims 2-4, 7, 15, 26, 28, 32, 33 are also allowable. Applicants respectfully request reconsideration and allowance of Claims 2-4, 7, 15, 26, 28, 32, 33.

Claims 8 and 34 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Zeira in view of Chen and further in view of Van Lieshout, and further in view of Shiu et al. US 6,983,166.

For at least the reasons Claims 8 and 34 each depend from an allowable independent claim, Claims 8 and 34 are also allowable. Applicants respectfully request reconsideration and allowance of Claims 8 and 34.

Claims 16, 30, 44 and 47 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Zeira in view of Chen and further in view of Van Lieshout, and further in view of Krishnan (US Pub. No. 2005/0176455).

For at least the reasons Claims 16, 30, 44 and 47 each depend from an allowable independent claim, Claims 16, 30, 44 and 47 are also allowable. Applicants respectfully request reconsideration and allowance of Claims 16, 30, 44 and 47.

While the applicant believes that other arguments are available to highlight the allowable subject matter presented in various ones of these dependent claims, the applicant also believes that the comments set forth herein regarding allowability of the independent claims are sufficiently compelling to warrant present exclusion of such additional points for the sake of brevity and expedited consideration.

In summary, none of the references discloses or suggests "on a ***shared physical channel*** used to carry allocation and scheduling information from the base station to the remote transceiver, ***receiving (or sending) an allocation of a scheduled uplink transmission resource and transmit power control (TPC) command***", as required by the claims. For at least this reason, the alleged prior art references, alone or combined, do not teach or suggest all the claim limitations for Claims 1-4, 7, 8, 15-17, 26, 28, 30-34 and 43-50.

Accordingly, Applicant respectfully requests reconsideration and allowance of Claims 1-4, 7, 8, 15-17, 26, 28, 30-34 and 43-50.

The case is believed to be in condition for allowance and notice to such effect is respectfully requested. If there is any issue that may be resolved, the Examiner is respectfully requested to telephone the undersigned.

Respectfully submitted,

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